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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/909,562      | 07/20/2001  | Yakov Tokar          | SC0361WI            | 2577             |

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MOTOROLA INC  
AUSTIN INTELLECTUAL PROPERTY  
LAW SECTION  
7700 WEST PARMER LANE MD: TX32/PL02  
AUSTIN, TX 78729

EXAMINER

MOAZZAMI, NASSER G

| ART UNIT | PAPER NUMBER |
|----------|--------------|
|----------|--------------|

2187

DATE MAILED: 07/24/2003

10

Please find below and/or attached an Office communication concerning this application or proceeding.

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# Office Action Summary

Application No.  
09/909,562

Applicant(s)  
Tokar et al.

Examiner  
Nasser Moazzami

Art Unit  
2187



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE Three MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on Jul 11, 2003
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1, 2, and 10-14 is/are pending in the application.
- 4a) Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 2, and 10-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claims \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some\* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\*See the attached detailed Office action for a list of the certified copies not received.

- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

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**DETAILED ACTION**

***Request for Continued Examination***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 07/11/2003 has been entered.

***Response to Amendment***

2. This office action is in response to applicant's amendment dated 07/11/2003 in response to office action mailed on 03/11/2002.

***Response to Arguments***

3. Applicant's arguments filed 01/21/2003 have been fully considered but they are not persuasive.

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In response to applicant's arguments, examiner refer the applicant to the following:

Applicant's arguments in regard to "loading the additional data into the line in the cache as it is received without waiting for completion of the step of placing the first data in the line in the cache and onto the data bus...", Ng clearly disclose that when a first request is processing, it will prefetch additional data. It seems that applicant is mis-interpreting the reference, the column in the Ng's patent (column 8, lines 29-43) is referring to receiving a second request during the prefetching which is happening based on the first request and the **waiting is in regard to the second request hitting the prefetching range not a first request**. However, the claim language is referring to the first request and the prefetching that is caused by the first request.

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-2, and 10-14 are rejected under 35 U.S.C. 102(b) as being anticipated by Ng (U.S. Patent No. 5,623,608).

As for claim 1, Ng teaches a method for filling a line in a cache, comprising the steps of: sending a request for data to be provided on a data bus to the cache at a first address [*the purpose of the cache in every computer system is to increase access speed to the data, so initial read request from the processor first goes to the cache (column 1, lines 21-25, and lines 36-37; column 5, lines 58-60; column 8, lines 29-30; and see step 64 of figure 3B)*]; sending a first request external to the cache for first data at the first address [*if there is a cache miss, the request will be provided to the slower memory such as slow RAM, DASD or Optical disk (see figure 1; and step 90 of figure 3B)*]; defining a first pointer for the first address [*the address of the first data access request*]; sending for additional data at additional addresses, the additional addresses being consecutive with the first address [*after completion of the*

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*fetch operation, the data store continues to read in consecutive order sufficient additional subsequent data blocks to fill the active buffer memory segment (column 1, lines 51-54)];* defining a second pointer for the address of the data that was last sent for *[the prefetching address rang];* receiving the first data located at the first address and placing the first data in the line in the cache and onto the data bus ; loading the additional data into the line in the cache as it is received without waiting for completion of the step of placing the first data in the line in the cache and onto the data bus *[the data store first fetches the requested data blocks and stores it in the buffer memory; the external processor receives data blocks on the bus in response to the same data access request; a requested data block is stored and subsequent prefetched data blocks are written in consecutive order to the segment in the buffer memory (column 1, lines 49-51; column 5, lines 58-61; and column 6, lines 7-11)];* defining a third pointer for the address of the data that was last received *[the last address before halting prefetching];* terminating the loading of the additional data in response to a second request for different data that is at a different address from the additional addresses; and sending the second request external to

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the cache for the different data at the different address *[if the data access request is not in the buffer memory and is not in the prefetching range, immediately halting the present prefetching access to initiate the new fetching access (column 8, lines 28-43; also see figures 3A and 3B)]*.

As for claim 2, Ng teaches continuing loading the additional data into the line in the cache as it is received in response to receiving a data request at one of the additional addresses for data not present in the cache *[if the data access request finds that the requested data block is not in the buffer memory, but it is in the prefetching access in progress, waiting for completion of the present prefetching (column 8, lines 28-35; also see figures 3A and 3B)]*.

As for claims 10-14, Ng discloses a processing system *[system 10 (see figure 1)]* with a number of units for performing the step functions of the method claims 1, and 2, wherein the cache is characterized as having a plurality of lines that each comprise locations having consecutive addresses *[buffer memory 26 organized as a plurality of memory segments, each segment*

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*provides for contiguous storage of 32 data blocks (column 5, lines 62-67; also see figure 2)]*, and providing a hit signal if a request for data is contained in the cache and a miss signal if the request for data is not contained in the cache [*buffer hit and buffer miss (column 1, lines 56-61; and column 8, lines 28-36; also see figure 3B step 64)]* . Therefore claims 6-9 encompass the same scope of the invention as those of the claims 1, and 2 and are rejected for the same reasons as stated above with respect to claims 1, and 2.

#### **Conclusion**

6. When responding to the office action, applicant are requested to provide examiner with the line numbers and page numbers in the application and/or references cited to assist examiner to locate the appropriate paragraphs.

**Any response to this action should be mailed to:**

Commission of Patent and Trademarks  
Washington, D.C. 20231

7. Any inquiry concerning this communication from the examiner should be directed to Nasser Moazzami whose telephone number is (703) 305-0017 from 8:00am-5:30pm on Monday-Friday or to the



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examiner's supervisor, Donald Sparks who can be reached at (703)308-4908 on Monday-Thursday from 8:00am-6:00pm EST.

8. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the group receptionist whose telephone number is (703)305-3900.

9. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 746-7239 for regular communications and (703) 746-7238 for After Final communication.

10. A shortened statutory period for response to this action is set to expire 3 (three) months from the date of this letter. Failure to respond within the period for response will cause the application to become abandoned (see MPEP 710.02 (b) ).

Nasser Moazzami

  
Examiner

07/22/2003